

is said not to thrive in limestone regions. May be employed as a sand binder. It will endure frost, but is injured by very severe temperatures, especially in exposed situations. Should be sown at the time of the early spring crops, either alone or drilled in with a cereal. In the latter case about 15 pounds to the acre is considered sufficient.

Furze is also used in Europe as a hedge plant, and for this purpose is sowed in the row, about 7 pounds to the mile. Also called gorse and whin.

#### 1446. *ULEX EUROPAEUS*.

#### Foxtail furze.

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

An improved variety of the wild furze, having a somewhat regular pyramidal shape with more crowded branches. The spines are also less rigid, so that they may be grazed without going through the bruising process. The seed is rather difficult to obtain. For an acre 15 or 20 pounds is considered sufficient. It has been suggested that this is a step in the direction of a spineless furze to be obtained by selection.

#### 1447. *ULEX NANUS*.

#### Dwarf furze.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

A much smaller species than *Ulex europaeus*. It is of spreading habit and thrives in moist situations, even in swampy places, where the other species would not grow. It might prove of use as a winter soiling crop in regions inclined to be barren, but its utility is likely to be local.

#### 1448. *ASTRAGALUS FALCATUS*.

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

A species native to the Caucasus. It should be tried as a forage plant in the Rocky Mountain region.

#### 1449. *BRASSICA NAPUS*.

#### March rape.

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

This is a quick-growing form of the winter rape and may be sown either in the fall or spring for producing a very early crop of forage. In Europe it is valued for reseeding deficient places in fields of winter rape. Uses and methods of cultivation follow those of the regular winter rape, of which Mr. Jared G. Smith writes briefly as follows:

"A succulent and nutritious forage plant, closely related to the Swede turnips. It is adapted to deep, rich, and warm loams and sandy soils. It has been widely cultivated in the northern United States and Canada, and succeeds on any rich and well-drained soil, provided the summers are not too hot and dry. If the ground is in good condition and free from weeds it may be sown broadcast at the rate of 3 to 5 pounds of seed per acre. If the land is wet, however, rape should be sown in raised drills, when 1 or 2 pounds will be sufficient. The time for sowing the seed will vary with the object sought and the climate. For soiling purposes it may be sown in May in the States bordering on Canada, and cut or eaten off when it is sufficiently advanced. It will grow up again and may be used a second time in the same manner, but ordinarily the best results are obtained when it is sown during the latter part of June or the first half of July. When put in earlier the hot suns of August seem to hasten its maturity, and the yield is not satisfactory. If sown in drills, it should be cultivated as long as a horse can be driven between the rows. Sheep may be pastured upon a field of rape by cutting it up into small pens by means of movable hurdles, so that the different parts of the field may be depastured in rotation. Cattle should not be turned into a field, because they will trample and destroy much more than they eat. Rape fed to cows increases the flow of milk, and there is less danger of the milk being tainted than when turnips or turnip tops are fed. There is considerable danger in turning hungry sheep or cattle into a field, because of a liability to bloat. It is also a good rule never to turn animals into a field in the early morning."